



## Using the Testek 4RM Server Simulator in IT Cabinets

The Testek TAC230-4RM is a 4U (7" high) 19" rack mounted load bank designed to simulate IT server operation as part of the testing and commissioning of data centers.

The 4RM load bank can operate in compliance to Ashrae TC9.9 recommended cold aisle temperature range ( 18°C -27°C / 64°F - 80°F).

The 4RM load bank can be used to determine the temperature rise time period to 40°C - 45°C / 104 - 113°F during simulated failure of the cooling system. Such testing will allow IT managers to build SOP and staff training programs for the maximum operating temperature of commercial grade IT equipment.

The 4RM load bank also provides complete electrical compatibility for use with PDU power strips or IT cabinet tap off boxes used inside a data room.

The 4RM load bank design consists of 2 independent loads each connected from a C20 panel mounted socket.

Each load channel is rated for 1.11 KW via panel mounted switches to give a total load of 2.2 KW, 9.6 A, 230 VAC. The total load from a 4RM load bank is therefore 4.4 KW.

The 4RM load bank can be used with either 10A C13 cables or 16A C19 cables for direct connection to C14 or C20 PDU sockets as detailed below:

### Single Phase PDU:

Figure 2 illustrates how to connect a 4RM to a single phase PDU.

Single Phase Load Switch Ratings				Panel Socket
Load 1	1-1	4.8 A	1100 W	C20
	1-2	4.8 A	1100 W	C20
Load 2	2-1	4.8 A	1100 W	C20
	2-2	4.8 A	1100 W	C20
<b>4400 W</b>				

### Single Phase Tap Off Boxes:

Figure 3 illustrates how to connect a 4RM to single phase tap off box.

HAC230-6RM		Cable type	Tap off box sockets	
4RM panel socket	Single phase current	BLUE female commando plugs	Current rating	Single Phase
C20	9.6 A	C19-C16	16 A	16A BLUE
C20	9.6 A	C19-C32	32 A	32A BLUE
<b>Total</b>	<b>19.2 A</b>			



Figure 1 - TAC230-4RM Server Simulator

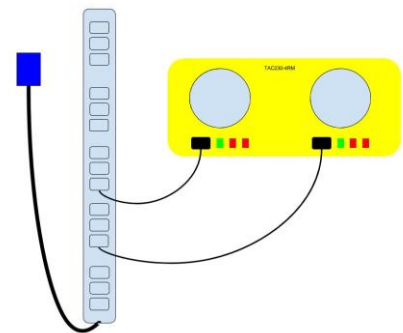


Figure 2

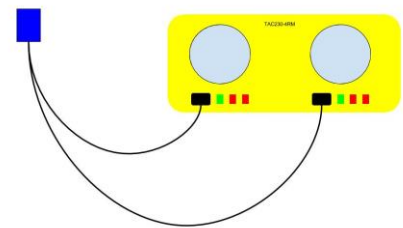


Figure 3





## TECHNICAL SUMMARY SHEET

### Testek **TAC230-4RM** 19" RACK MOUNTED SERVER SIMULATOR

#### TAC230-4RM Specification

Model Number	TAC230-4RM
Nominal Voltage	230 VAC, single phase 50/60 Hz, 240 VAC maximum
Full Load Rating	Nominal: 4400 W – 19 A – 230 VAC single phase
Controls	2 separate 2222 W loads at 230 VAC Each load adjustable in 2 steps of 1111 W
Adjustment	4 x 1111 W steps, selected via panel mounted illuminated switches
Connection	Two C20 panel mounted sockets for each independent load channel
Cooling	2 low noise, horizontal force air cooling fans, powered from the test source. Cool air intake at front, hot air exhaust at rear.
Airflow	Each fan 85 CFM at minimum pressure zero Pa. (Static) Total airflow 170 CFM
Element Type	High temperature ni-chrome tape wound mounted on mica composite card.
Dimensions & Weight	4U - 19" rack assembly. Approximate Weight: 18 lbs. [8 kg] Approximate Dimensions: 7" high x 10" deep [180 mm x 250 mm] plus handles
Construction	Zintec steel, with powder coated yellow gloss finish front panel. Enclosed tray assembly with rear grill.
Operating Temperature	0 - 45°C / 0 - 113°F
Storage Temperature	0 - 80°C / 0 - 176°F
Movement	Front handles for slide in assembly to standard IT 19" racks
Optional Extras	Cables: Single Phase

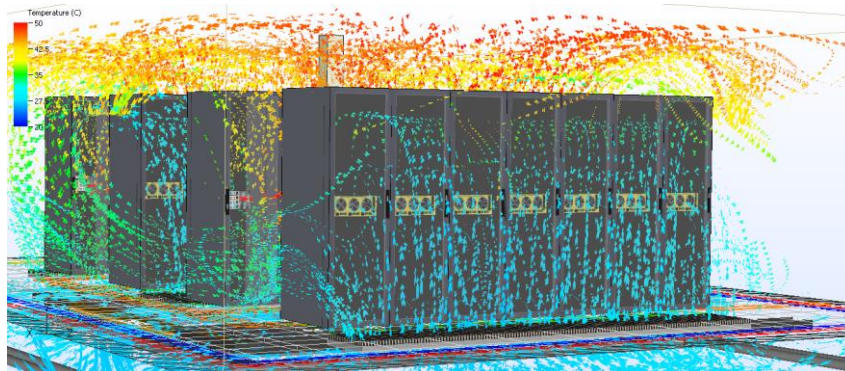
#### Adjustable Airflow / Heat Dissipation per TAC230-4RM

Kw Load	Delta T range from 144 to 432 CMH	
	Minimum	Maximum
1.1KW to 2.2KW	6°C / 43°F	12°C / 54°F
3.3KW to 4.4KW	10°C / 50°F	15°C / 59°F

#### Environmental Air Temperatures

Cold Aisle Temperature Range	Ashrae 18°C - 27°C / 64°F - 80°F
IT Equipment Maximum Operating Temperature	> 40°C - 45°C / 104°F - 113°F
Adjustable Cold Aisle ΔT Range	ΔT 6°C - 20°C / 43°F - 68°F

#### Typical IST simulated operation



TAC230-4RM Technical Summary Sheet